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(19) 日本國特許庁 (J P)

(12) 公開特許公報 (A)

(11) 特許出願公開番号

特開2000-224482

(P2000-224482A)

Publication date (43)公開日 平成12年8月11日(2000.8.11)

(51) InLCl^7

識別記号

Fi

 $\frac{1}{2} \sqrt{2} - \frac{1}{2}$ (卷末)

HIO 4 N 5/335

HO 4N 5/335

E 4M118

H O I L 27/146

H0 1 L 27/14

A 5C024

審査請求 有 請求項の数 2 OL (全 10 頁)

(21) 出願番号 特願平11-20502

Application No. 11-20502

(22) 出願日 平成11年1月28日(1999.1.28)

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Fターム(参考) 4M118 AA10 AB10 BA14 CA02 DD09

DD12 FA06

50024 AA01 CA00 FA01 GA01 GA31

HAJO JAC

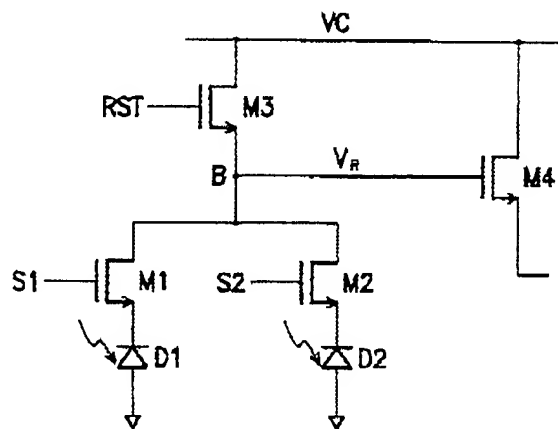
(54) 【発明の名称】 共用脱出し構造を有するアクティブイメージセンサ

Active image sensor with common read-out structure

(57) 【要約】

【課題】 相接する2つのアクティブイメージセンサのフォトダイオードが一組の読出し回路を共用できるようなアクティブイメージセンサを提供すること。

【解決手段】 第1のフォトダイオードおよび第1のNMOSトランジスタ、第2のフォトダイオードおよび第2のNMOSトランジスタ、ならびに第3のNMOSトランジスタおよび第4のNMOSトランジスタ、を有し、第1、第2の選択信号およびリセット信号の切り換えを時間割制御し、合わせて可変電圧源の電位を切り換えることにより、前記第1、第2のフォトダイオードにより感知された光度を、前記第4のNMOSトランジスタのソースにある出力端から読取ることができる共用読出し構造を有するアクティブイメージセンサ。



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06638668 **Image available**
ACTIVE IMAGE SENSOR PROVIDED WITH SHARED READ STRUCTURE

PUB. NO.: 2000-224482 [*JP 2000224482* A]
PUBLISHED: August 11, 2000 (20000811)
INVENTOR(s): O ITO
APPLICANT(s): IND TECHNOL RES INST
APPL. NO.: 11-020502 [JP 9920502]
FILED: January 28, 1999 (19990128)
INTL CLASS: H04N-005/335; H01L-027/146

ABSTRACT

PROBLEM TO BE SOLVED: To provide an active image sensor capable of sharing one set of read circuits by the photodiodes of two active image sensors in contact with each other.

SOLUTION: The active image sensor provided with a shared read structure is provided with a first photodiode D1, a first NMOS transistor M1, a second photodiode D2, a second NMOS transistor M2, a third NMOS transistor M3 and a fourth NMOS transistor M4. By time division controlling the changeover of first and second selection signals are reset signals and switching the potential of a variable voltage source, luminosity sensed by the first and second photodiodes D1, D2 is read from an output end present at the source of the fourth NMOS transistor M4.

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PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2000-224482

(43)Date of publication of application : 11.08.2000

(51)Int.Cl.

H04N 5/335
H01L 27/146

(21)Application number : 11-020502

(71)Applicant : IND TECHNOL RES INST

(22)Date of filing : 28.01.1999

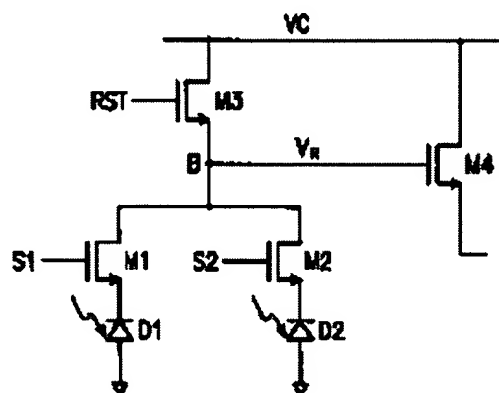
(72)Inventor : O ITO

(54) ACTIVE IMAGE SENSOR PROVIDED WITH SHARED READ STRUCTURE

(57)Abstract:

PROBLEM TO BE SOLVED: To provide an active image sensor capable of sharing one set of read circuits by the photodiodes of two active image sensors in contact with each other.

SOLUTION: The active image sensor provided with a shared read structure is provided with a first photodiode D1, a first NMOS transistor M1, a second photodiode D2, a second NMOS transistor M2, a third NMOS transistor M3 and a fourth NMOS transistor M4. By time division controlling the changeover of first and second selection signals are reset signals and switching the potential of a variable voltage source, luminosity sensed by the first and second photodiodes D1, D2 is read from an output end present at the source of the fourth NMOS transistor M4.



LEGAL STATUS

[Date of request for examination] 28.01.1999

[Date of sending the examiner's decision of rejection] 29.05.2001

[Kind of final disposal of application other than the examiner's decision of rejection or

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